

Work Order ID 85519

85519

Page 1

June-08-12 2:48:41 PM

Item ID: D3029-1

Accept

N900040100

Setup Start *NS1*

Revision ID:

Item Name: Spring

Stop *NS2*

Start Date: 08/06/2012 Start Qty: 6.00

6

Cust Item ID:

Required Date: 22/06/2012 Req'd Qty: 6.00

6

Customer:

Reference:

Approvals: Process Plan: MLJ

Date: 12/06/08 Tooling:

Date:

Run Start *NR1*

QC:

Date: SPC (Y/N):

Date:

Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D3029	Rev A								
100		0.00							
100	PURCHASING								
Purchasing	Memo	0.00							
Purchasing	Issue P/O: <u>17181</u>								
	Possible supplier: Northern Aero Industries								
	Order P/N B83605-1								
	Material: Ø0.041" piano wire								
	Dimensions: Mean dia.= 0.625" Pitch = 0.20" Length = 1.20"								
	All dimensions are in inches								
	Tolerances are per Dart QSI 018 unless otherwise noted								
110		0.00							
	Receive & Inspect for Damage & Mat'l Certs								
110									
Packaging	Memo	0.00							
Packaging	Ensure Material Release Note is attached								

CX 12/06/11 (6)

12/9/10 (6)

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Page 2

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Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start ***NR1***

QC:

Date:

SPC (Y/N):

Date:

Stop ***NR2***

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

120

QC6- Inspect dimensions to drawing

0.00

DAS
16
8-6

120

QC

Memo

0.00

Quality Control

130

Small Fab

0.00

130

Small Fab

Memo

0.00

Small Fab

Cut # 65 Ajax Spring in 1/2 as per Dwg D3029

140

QC5- Inspect part completeness to step on W/O

0.00

140

QC

Memo

0.00

Quality Control

DAS
30
8-6

6

SB
12/10/12

NCR: Yes / No

WORK ORDER NON-CONFORMANCE / UPDATE

DQA: _____ Date: _____

QA Closed: _____ Date: _____

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update <input type="checkbox"/>	AGAINST DEPARTMENT/PROCESS <table style="width: 100%;"> <tr> <td>Skid-tube <input type="checkbox"/></td> <td>Crosstube <input type="checkbox"/></td> <td>Prod. Eng. Coord. <input type="checkbox"/></td> <td>Engineering <input type="checkbox"/></td> </tr> <tr> <td>Machining <input type="checkbox"/></td> <td>Small Fab <input type="checkbox"/></td> <td>Rec/Store/Packaging <input type="checkbox"/></td> <td>Quality <input type="checkbox"/></td> </tr> <tr> <td>Thermoforming <input type="checkbox"/></td> <td>Finishing <input type="checkbox"/></td> <td>Supplier <input type="checkbox"/></td> <td></td> </tr> <tr> <td>Large Fab <input type="checkbox"/></td> <td>Composite <input type="checkbox"/></td> <td>Other <input type="checkbox"/></td> <td></td> </tr> </table>	Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Engineering <input type="checkbox"/>	Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Quality <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Supplier <input type="checkbox"/>		Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Other <input type="checkbox"/>	
Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Engineering <input type="checkbox"/>															
Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Quality <input type="checkbox"/>															
Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Supplier <input type="checkbox"/>																
Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Other <input type="checkbox"/>																

Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Doc/Data <input type="checkbox"/>									
Equip/Tooling <input type="checkbox"/>									
Operator <input type="checkbox"/>									
Material <input type="checkbox"/>									
Offset/Setup <input type="checkbox"/>									
Other <input type="checkbox"/>									
Process <input type="checkbox"/>									
Supplier <input type="checkbox"/>									
Training <input type="checkbox"/>									
Unauthorized <input type="checkbox"/>									

FAULT CATEGORY

Landing Gear <input type="checkbox"/> Bending Passes Below Min <input type="checkbox"/> Centre Not Concentric to O/S <input type="checkbox"/> Cracks <input type="checkbox"/> Crushed/Crimp at Bending <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Other <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Ripples on Inner Bend <input type="checkbox"/> Torque Waves in Extrusion <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube	Hardware <input type="checkbox"/> Breaking <input type="checkbox"/> Missing <input type="checkbox"/> Size/Length <input type="checkbox"/> Spinning <input type="checkbox"/> Threading <input type="checkbox"/> Wrong Drill Holes <input type="checkbox"/> Misaligned <input type="checkbox"/> Ovalized <input type="checkbox"/> Over/Undersized <input type="checkbox"/> Too Many	General <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Documentation/Data <input type="checkbox"/> Finish <input type="checkbox"/> Inspection Incomplete <input type="checkbox"/> Inspection Unqualified <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Jigs/Fixtures/Tooling <input type="checkbox"/> Kit Incorrect <input type="checkbox"/> Kit Missing	<input type="checkbox"/> Maintenance <input type="checkbox"/> Mislabeled <input type="checkbox"/> Off-Set <input type="checkbox"/> Orientation Misread <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence <input type="checkbox"/> Outside Dimensions <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Lost <input type="checkbox"/> Part Moved <input type="checkbox"/> Raw Material <input type="checkbox"/> Set-up <input type="checkbox"/> Supplier <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled <input type="checkbox"/> Other _____ _____ _____
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Work Order ID 85519

85519

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June-08-12 2:48:41 PM

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Setup Start ***NS1***

Revision ID:

Item Name: Spring

Stop ***NS2***

Start Date: 08/06/2012 Start Qty: 6.00

6

Cust Item ID:

Required Date: 22/06/2012 Req'd Qty: 6.00

6

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start ***NR1***

QC:

Date:

SPC (Y/N):

Date:

Stop ***NR2***

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

150

Identify as per dwg & Stock Location

GA

0.00

150

Packaging

Memo

0.00

Packaging

6

SB 12/10/12

160

QC21- Final Inspection - Work Order Release

0.00

160

QC

Memo

0.00

Quality Control

12/10/12

MLF 12-10-12

Picklist Print

June-08-12 2:48:45 PM

Page 1

Work Order ID: 85519

85519

Parent Item: D3029-1

D3029-1

Parent Item Name: Spring

Start Date: 08/06/2012

Required Date: 22/06/2012

Start Qty: 6.00

Required Qty: 6.00

Comments: IPP: C05.03.10Changed SupplierKJ/JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
B83605-1		Purchased	No			110	Each	0.0000	1	6			

B83605-1

LOCK

**

(Signature)
11/2/12 (6)

NCR: Yes / No

WORK ORDER NON-CONFORMANCE / UPDATE

DQA: _____ Date: _____

QA Closed: _____ Date: _____

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update <input type="checkbox"/>	AGAINST DEPARTMENT/PROCESS <table style="width: 100%;"> <tr> <td style="width: 25%;">Skid-tube <input type="checkbox"/></td> <td style="width: 25%;">Crosstube <input type="checkbox"/></td> <td style="width: 25%;">Prod. Eng. Coord. <input type="checkbox"/></td> <td style="width: 25%;">Engineering <input type="checkbox"/></td> </tr> <tr> <td>Machining <input type="checkbox"/></td> <td>Small Fab <input type="checkbox"/></td> <td>Rec/Store/Packaging <input type="checkbox"/></td> <td>Quality <input type="checkbox"/></td> </tr> <tr> <td>Thermoforming <input type="checkbox"/></td> <td>Finishing <input type="checkbox"/></td> <td>Supplier <input type="checkbox"/></td> <td></td> </tr> <tr> <td>Large Fab <input type="checkbox"/></td> <td>Composite <input type="checkbox"/></td> <td>Other <input type="checkbox"/></td> <td></td> </tr> </table>	Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Engineering <input type="checkbox"/>	Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Quality <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Supplier <input type="checkbox"/>		Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Other <input type="checkbox"/>	
Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Engineering <input type="checkbox"/>															
Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Quality <input type="checkbox"/>															
Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Supplier <input type="checkbox"/>																
Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Other <input type="checkbox"/>																

Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Doc/Data									
Equip/Tooling									
Operator									
Material									
Offset/Setup									
Other									
Process									
Supplier									
Training									
Unauthorized									

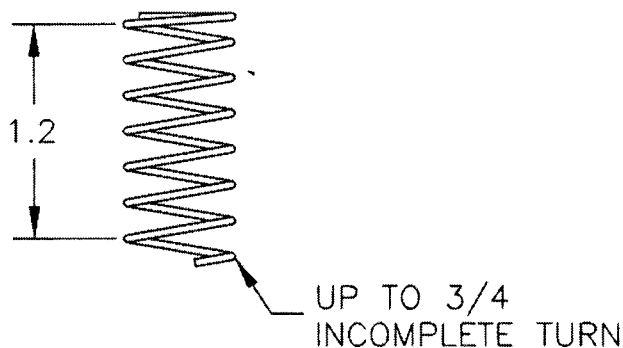
FAULT CATEGORY

Landing Gear	Hardware	General	Maintenance
<input type="checkbox"/> Bending Passes Below Min	<input type="checkbox"/> Breaking	<input type="checkbox"/> Burrs	<input type="checkbox"/> Set-up
<input type="checkbox"/> Centre Not Concentric to O/S	<input type="checkbox"/> Missing	<input type="checkbox"/> Contamination	<input type="checkbox"/> Supplier
<input type="checkbox"/> Cracks	<input type="checkbox"/> Size/Length	<input type="checkbox"/> Cut Too Short	<input type="checkbox"/> Off-Set
<input type="checkbox"/> Crushed/Crimp at Bending	<input type="checkbox"/> Spinning	<input type="checkbox"/> Documentation/Data	<input type="checkbox"/> Orientation Misread
<input type="checkbox"/> Inspection Strip in Tube	<input type="checkbox"/> Threading	<input type="checkbox"/> Finish	<input type="checkbox"/> Out of Calibration
<input type="checkbox"/> Other	<input type="checkbox"/> Wrong	<input type="checkbox"/> Inspection Incomplete	<input type="checkbox"/> Out of Sequence
<input type="checkbox"/> Positioned Wrong		<input type="checkbox"/> Inspection Unqualified	<input type="checkbox"/> Outside Dimensions
<input type="checkbox"/> Ripples on Inner Bend	Drill Holes	<input type="checkbox"/> Instructions Incomplete/Unclear	<input type="checkbox"/> Over/Under tolerance
<input type="checkbox"/> Torque Waves in Extrusion	<input type="checkbox"/> Misaligned	<input type="checkbox"/> Jigs/Fixtures/Tooling	<input type="checkbox"/> Part Lost
<input type="checkbox"/> Turning Sequence	<input type="checkbox"/> Ovalized	<input type="checkbox"/> Kit Incorrect	<input type="checkbox"/> Part Moved
<input type="checkbox"/> Wave/Twist in Tube	<input type="checkbox"/> Over/Undersized	<input type="checkbox"/> Kit Missing	<input type="checkbox"/> Raw Material
	<input type="checkbox"/> Too Many		<input type="checkbox"/> Wrong Stock Pulled
			<input type="checkbox"/> Other



DESIGN CP	DRAWN BY CP	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED #	APPROVED #	DRAWING NO. D3029	REV. A SHEET 1 OF 1
DATE 01.05.18		TITLE SPRING	SCALE 1:1
A	01.05.18	NEW ISSUE	

SPECIFICATION CONTROL DRAWING



D3029-1

- 1) DIMENSIONS: MEAN DIAMETER: 0.625
PITCH: 0.20
LENGTH: 1.2
- 2) MATERIAL: ϕ 0.041 PIANO WIRE
- 3) POSSIBLE SUPPLIERS: NORTHERN AERO INDUSTRIES P/N B83605-1
ADAMS SUPPLY LTD., 1/2 OF #65 AJAX SPRING
- 4) ALL DIMENSIONS ARE IN INCHES
- 5) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 25519 MCT
12/06/08

RELEASED
01.05.18

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Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID PO17181

Purchase Order Date 6/11/12

PO Print Date 9/05/12

Page Number 1 of 1

Order From :

VU-NOR003

NORTHERN AERO INDUSTRIES LTD.
25 DUNLOP AVENUE
WINNIPEG, MB R2X 2V2
CA

Contact Name

Vendor Phone

204-772-9922

Vendor Fax

204772-7568

Vendor Account Nbr

Buyer

Chantal Lavoie

Requisition Nbr

Tax Resale Nbr

10127-2607

Terms

Net 30

Currency

USD

FOB

Destination-Collect

Ship To :

DART AEROSPACE LTD

1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

REVISED \$

Line Nbr	Reference Revision ID	Description/ Mfg ID	Req Date/ Taxable	Req Qty/ Unit of Measure	Ship Method	Unit Price	Extended Price
1	B83605-1	LOCK	9/14/12 Yes	6.00 Each	FedEx PI collect	\$12.0000	\$72.00

Special Inst: AS PER DWG D3029 REV. A
B85519
MATERIAL: Ø0.041" PIANO WIRE
DIMENSIONS: MEAN DIA. = 0.625"
PITCH = 0.20" LENGTH = 1.20"
ALL DIMENSION ARE IN INCHES

B83603-1	Lock	9/14/12 Yes	6.00 Each	FedEx PI collect	\$85.0000	\$510.00
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Special Inst: AS PER DWG D3030 REV. A
B85518
MATERIAL: 2024-T3 AS PER QQ-A-225/6
0.010" MAX DIFF. BETWEEN 0.525" DIM.
EACH SIDE
ALL DIAMETERS CONCENTRIC WITHIN
0.005 T.I.R
ALL DIMENSION ARE IN INCHES

CERTIFICATE OF CONFORMITY
REQ'D UPON DELIVERY

PO Total: \$582.00

Change Nbr:

3

Change Date: 9/05/12

No substitution or deviation without
consent.
Certificate of Conformity or Material
Certification required - YES NO

ACS-NAI Ltd.

25 Dunlop Avenue
R2X 2V2 Winnipeg
Canada
Tel : 204-772-9922
Fax : 204-772-7568

Delivery No. : 3080
Delivery Date : 09/06/2012
SO No. : 27436
Your Reference : PO: 17181
Delivery Method : FEDEX
Payment Condition : Net 30 Days

Delivery to: Dart Aerospace Ltd.

Attention: Chantal Lavoie
1270 Aberdeen Street

Hawkesbury K6A 1K7
Canada

Item	Description Batch Number	Total		Qty	
		Ordered	Unit	Delivered	Delivery Date
B83605-1	SPRING 12-3551	6	EA	6	09/14/2012
B83603-1	LOCK 12-3345	6	EA	6	09/14/2012
Ship via FedEx P1 to Account # 151793240 EMail: clavoie@dartaero.com Ph: 613-632-9577					
Packages: 0 Gross Weight: 0.00 Net Weight:					

Ordered by: Dart Aerospace Ltd.

Attention: Chantal Lavoie
1270 Aberdeen Street

Hawkesbury K6A 1K7
Canada

Invoice to: Dart Aerospace Ltd.

Attention: Accounts
1270 Aberdeen Street

Hawkesbury K6A 1K7
Canada

0.00

Remarks**Certification Statement**

I hereby certify that the aircraft part(s) described hereon were acquired from a source of supply that is consistent with the conditions under which TCCA distributor approval AMO88-97 has been granted.

Signatory

Date:

CERTIFICATE OF CONFORMITY

Form Tracking No. 27436-1

Work Order/Contract/Invoice: PO 17181

Cage Code: MFR L0555

Item	Description	Part No.	Quantity	Serial/Batch	Status
1	Spring	B83605-1	6	12-3551	New
2	Lock	B83603-1	6	12-3345	New

DAS
16
2-15
17/09/11

Remarks:

THESE ITEMS CONFORM TO DESIGN DATA B83604 (REV. N/C).

New-Unused Parts/Material Certification

The items described above have been manufactured using standards employed by a TCCA approved manufacturer in accordance with CAR 561 and a AS9100 Quality Assurance System.

Signature

Name R.D. WILLIAMSON

Date (dd mmm yyyy)
07-Sep-12

Used, Repaired or Overhauled Parts Certification

The items described above have been maintained using standards employed by a TCCA approved maintenance organization in accordance with CAR 573 and a AS9100 Quality Assurance System.

Signature

Name

Date (dd mmm yyyy)

User/Installer Responsibilities: This certificate does not constitute authority to install the item(s) described above on an in-service type certified aircraft.